

**AMENDMENTS TO THE CLAIMS:**

1. (Canceled)

2. (Currently Amended) A method of improving cholesterol levels in a subject in need of such improvement, the method comprising:

identifying a subject with hypercholesteremia or at a risk of developing hypercholesteremia having a "12" genotype where lysine is located at position 153 of ~~for~~ the second exon of the myostatin gene, wherein the subject is in need of improved cholesterol levels; and

engaging the subject in extensive exercise training for a period of time sufficient to improve the cholesterol levels in the subject.

3. (Canceled)

4. (Currently Amended) A method of improving diabetes status in a subject in need of such improvement, the method comprising:

identifying a subject with diabetes or at a risk of developing diabetes having ~~a~~ an "11" genotype where arginine is located at position 153 of ~~for~~ the second exon of the myostatin gene, wherein the subject is in need of improved diabetes status; and

engaging the subject in extensive exercise training for a period of time sufficient to improve the diabetes status in the subject.

5. (Currently Amended) The method of claim 2, wherein said extensive exercise training is at least 10 single courses of exercise over an exercise period from about 50 to ~~[[500]]~~ 400 days.

6. (Currently Amended) The method of claim 4, wherein said extensive exercise training is at least 10 single courses of exercise over an exercise period from about 50 to ~~[[500]]~~ 400 days.

7. (New) A method of improving cholesterol levels in a subject in need of such improvement, the method comprising:

identifying a subject with hypercholesteremia or at a risk of developing hypercholesteremia having a genotype where lysine is located at position 153 of the second exon of the myostatin gene, wherein the subject is in need of improved cholesterol levels; and

engaging the subject in exercise training for nine months to improve the diabetes status in the subject.

8. (New) A method of improving diabetes status in a subject in need of such improvement, the method comprising:

identifying a subject with diabetes or at a risk of developing diabetes having a genotype where arginine is located at position 153 of the second exon of the myostatin gene, wherein the subject is in need of improved diabetes status; and

engaging the subject in exercise training for nine months to improve the diabetes status in the subject.